

years' Milling Index and Crop survey Results", funded by the Maize Trust. A complete statistical analysis of the maize quality data from the 2001/2002 to 2011/2012 seasons were performed for the following measurements: Protein (crude), starch, fat (crude), hectolitre mass, 100 kernel mass, total deviations (grading data), Roff Milling Index, Break 1 flour yield, Break 2 flour yield, Break 3 flour yield, Grits yield and Bran yield (all Roff milling data).

As part of the project, the possibility of developing a Geographic Information System (GIS) map system, where grain production regions (with the boundaries illustrated) are presented on a map of South Africa, was explored. SIQ (with additional data from Agbiz Grain on the regional boundary specifications) created a software package based on an open source GIS package (QGIS). These GIS maps show mean values for a trait for a specific region as an average for all seasons combined or as individual seasons on a year to year basis. The results of the crop quality traits are represented in a colour scale format – highest to lowest values are indicated by the darkest to the lightest colour. Mean values are showed as a legend. This GIS tool provides a good starting point but will however require further optimization in future.

The project outcome provides a decision making tool to the maize industry stakeholders to assist in the identification of potential problem areas in maize quality and to focus future research activities.

2. Production

The finalized commercial crop figure for commercial maize for the 2013/2014 season as overseen by the National Crop Estimates Liaison Committee (CELC) is 14 250 000 tons. This is the largest maize crop in 33 years and according to CELC figures also the highest yielding crop ever. White maize's contribution to the total production was 7 710 000 tons (54%) and that of yellow maize 6 540 000 tons (46%).

The total area utilized for maize production in the 2013/2014 season was 2 688 200 hectares, a decrease of 3.3% compared to the previous season. White maize was planted on 1 551 200 hectares and yellow maize on 1 137 000 hectares (1 617 200 and 1 164 000 hectares respectively in the 2012/2013 season).

The maize yield increased from 4.25 t/ha in the previous season to 5.30 t/ha this season. White maize yielded 4.97 t/ha and yellow maize 5.75 t/ha, representing increases of 43% and 8% respectively.

The national Crop Estimates Committee's (CEC) estimated total production figures was revised, using

as basis for the calculations, the South African Grain Information Services' (SAGIS) published figures of actual deliveries. Figures to determine on-farm usage and retentions from the maize utilization survey, which was conducted by the Department of Agriculture, Forestry and Fisheries (DAFF) and the telephonic survey conducted by the National Crop Statistics Consortium (NCSC), were added to the SAGIS delivery figures to calculate the final crop production figures.

The final maize crop figure for the 2012/2013 season was also revised mainly due to the fact that the actual deliveries of maize for the period November 2013 to February 2014 was considerably more than projected. These increased actual deliveries as released by SAGIS, plus on-farm retentions, increased the final figure from 11 690 000 tons to 11 810 600 tons.

The major maize-producing provinces are the Free State, North West and Mpumalanga, contributing 84% of the total maize production in the RSA. The Free State produced 6 247 250 tons of maize on 1 195 000 hectares with a yield of 5.23 t/ha. North West produced 2 898 000 tons of maize on 665 000 hectares yielding 4.36 t/ha and Mpumalanga produced 2 782 200 tons of maize on 500 000 hectares with a yield of 5.56 t/ha. Yellow maize contributed 67% of the total maize production in Mpumalanga while the majority of maize produced in the Free State and especially North West is white.

Please see the graphs on pages 3 to 5 for national and provincial figures for area planted, production and yield over seasons.

Favourable growing conditions also occurred in the USA and other maize producing countries in the Northern hemisphere, resulting in record crops and world maize production reaching new record levels in the 2013/2014 season.

According to the BFAP Baseline, Agricultural Outlook 2014 – 2023, maize plantings are expected to decrease slightly during 2015 and 2016 as a result of lower relative profitability and lower projected domestic prices. From 2017 to 2023, yellow maize planting is expected to increase at the expense of white maize, with the area under yellow maize production expected to reach a level of 1.2 million hectares. The increase in yellow maize is projected to be less than the reduction in white maize planting and as a result, total maize plantings will gradually decline toward the end of the baseline period to just over 2.4 million hectares. White and yellow maize yields are expected to average 5.4 t/ha and 5.9 t/ha respectively by 2023.